Form PTO-1449

INFORMATION DESCLOSURE CITATION

IN AN APPEARTION

Docket Number 416272005602

Application Number 10/698,824

**Applicants** 

Bob B. BUCHANAN et al.

(Use several sheets if necessary) Filing Date October 30, 2003

Group Art Unit Not Yet Assigned

Mailing Date December 4, 2003

## **U.S. PATENT DOCUMENTS**

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
CMK	1.	Apr. 1974	3,803,326	Craig et al.			
ĺ	2.	Sep. 1983	4,405,648	Atsumi et al.		<del></del>	
CMK	3.	Jul. 1991	5,028,419	Pigiet			

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Trans YES	lation NO
CMK	4.	Jul. 1975	1 400 972	Great Britain				
	5.	Jun. 1976	1 420 843	Great Britain				
CML	6.	May 1994	WO 96/12799	WIPO				

## OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

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CMK		7.	Holmgren, A. (1979) "Reduction of disulfides by thioredoxin. Exceptional reactivity of insulin an suggested functions of thioredoxin in mechanism of hormone action" <i>J. Biological Chemistry</i> 254 (18): 9113-9119.	
		8.	Schernthaner, G. (1993) "Immunogenicity and allergenic potential of animal and human insulins"  Diabetes care (Suppl 3): 155-165.	
		9.	Astwood et al., "Stability of Food Allergens to Digestion in Vitro," Nature Biotechnology, 14(10): 1269-1273, (1996).	
		10.	Birk, "Proteinase Inhibitors from Plant Sources," Method Enz., 45:695-739 (1976).	
		11.	Birk, Y., "The Bowman-Birk Inhibitor," Int. J. Peptide Protein Res. 25:113-131 (1985).	
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**EXAMINER:** 

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PTO/SB/08 (2-92) Sheet 2 of 5

Docket Number 416272005602 Application Number 10/698,824 Form PTO-1449 Applicants INFORMATION DISCENSIFIE CITATION Bob B. BUCHANAN et al. IN AN APPLICATION (Use several sheets if necessary) Filing Date October 30, 2003 Group Art Unit Not Yet Assigned Mailing Date December 4, 2003 Buchanan et al., "Thioredoxin: A Multifunctional Regulatory Protein with a Bright Future in CMK Technology and Medicine," Archives of Biochemistry and Biophysics, 314(2): 257-260, Buchanan et al., "Thioredoxin-linked Mitigation of Allergic Responses to Wheat," 15. Proceedings of the National Academy of Sciences of the United States of America, 94(10): 5372-5377 (1997). Burks, A.W. et al. (1992), "Allergenicity of peanut and soybean extracts altered by chemical 16. and thermal denaturation in patients with atopic dermatitis and positive food challenges," J. Allergy Clin. Immunol. 90:889-897. Bushuk, W., et al., "Wheat Cultivar Identification by Gliadin Electrophoregrams. I. 17. Apparatus, Method and Nomenclature," Can. J. Plant Sci. 58:505-515 (1978). Crawford et al., "Evidence for Function of the Ferredoxin/Thioredoxin System in the 18. Reductive Activation of Target Enzymes of Isolated Intact Chloroplasts," Arch. Biochem. Biophys. 271(1):223-239 (1989). 19. Dahle et al., "The Weakening Action of Thioctic Acid in Unyeasted and Yeasted Doughs." Cereal Chem. 43:682-688 (1966). De la Motte-Guery, F. et al., "Mutation of a Negatively Charged Amino Acid in Thioredoxin 20. Modifies its Reactivity with Chloroplastic Enzymes," Eur. J. Biochem. 196:287-294 (1991). Decottignies, P. et al. (1988) "Primary Structure of the Light-dependent Regulatory Site of 21. Corn NADP-Malate Dehydrogenase", The Journal of Biological Chemistry 263(24):11780-11785. 22. Droux, M. et al. (1987) "Ferredoxin-Thioredoxin Reductase, an Iron-Sulfur Enzyme Linking Light to Enzyme Regulation in Oxygenic Photosynthesis: Purification and Properties of the Enzyme from C.sub.3, C.sub.4, and Cyanobacterial Species". Archives of Bioche. Edman et al., "Sequence of Protein Disulphide Isomerase and Impications of its Relationship 23. to Thioredoxin," Nature, 317(19):267-270 (1985). Elsayed, S. et al. (1971) "Characterization of a major allergen (cod). Observations on effect 24. of denaturation on allergenic activity," J. Allergy 47:283-291. Esch et al. (1989), "Identification and localization of allergenic determinants on Grass Group 25. I antigens using monoclonal antibodies," J. Immunol. 142:179-184. Fickenscher, K., et al., "Purification and Properties of the Cytoplasmic Glucose-6-Phosphate 26. Dehydrogenase from Pea Leaves," Arch. Biochem. Biophys. 247:393-402 (1986). 27. Florencio et al., "An NADP/Thioredoxin System in Leaves: Purification and Characterization of NADP-Thioredoxin Reductase and Thioredoxin ih from Spinach," Arch. Biochem. CMK Biophys., 266(2):496-507 (1988). DATE CONSIDERED: **EXAMINER:** EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in

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PTO/SB/08 (2-92) Sheet 3 of 5

Docket Number 416272005602 Form PTO-1449 Application Number 10/698,824 INFORMATION DISCLOSURY CITATION Applicants IN AN APPLICATION Bob B. BUCHANAN et al. (Use several sheets if necessary) Filing Date October 30, 2003 Group Art Unit Not Yet Assigned Mailing Date December 4, 2003 Frick et al., "Immunoglobulin E Antibodies to Pollens Augmented in Dogs by Virus 28. CMK Vaccines," Am. J. Vet. Res., 44(3):440-445 (1983). Holmgren (1985), "Thioredoxin," Ann. Rev. Biochem. 54:237-271. 29. Holmgren et al. Enzymic reduction of disulfide bonds by thioredoxin. The reactivity of 30. disulfide bonds in human choriogonadotropin and its subunits. European J. Biochemistry 70(2):377-83 1976. Holmgren et al., "Thioredoxin and Glutaredoxin Systems" J. Biol. Chem., 264(24):13963-31. 13966 (1989). 32. Jacquot, J.-P., et al., "Enzyme Regulation in C.sub.4 Photosynthesis.sup.1,2" Plant Physiol. 68:300-304 (1981). Johnson et al., "Reduction of Purothionin by the Wheat Seed Thioredoxin System," Plant 33. Physiol., 85:446-451 (1987). Johnson, T.C., et al., "Thioredoxin and NADP-Thioredoxin Reductase from Cultured Carrot 34. Cells," Planta 171:321-331 (1987). Jones, B.L., et al. "Amino Acid Sequences of the Two alpha-Purothionins of Hexaploid 35. Wheat," Cereal Chem. 54:511-523 (1977). Kahlert et al., "Epitope Analysis of the Allergen Ovalbumin With Monoclonal Antibodies 36. and Patients'IgE," Molecular Immunology, 29(10):1191-1201 (1992). Kasarda, D.D., et al., "Wheat Proteins," Adv. Cer. Sci. Tech. 1:158-236 (1976). 37. Kassel, B., et al., "The Basic Trypsin Inhibitor of Bovine Pancreas," Biochem. Biophys, Res. 38. Commun. 20:463-468 (1965). Kobrehel, K. et al., "Isolation and Partial Characterisation of Two Low Molecular Weight 39. Durum Wheat (Triticum durum) Glutenins," J. Sci. Food Agric, 48:441-452 (1989). Laemmli, "Cleavage of Structural Proteins During the Assembly of the Head of 40. Bacteriophage T4" Nature 227:680-685 (1970). MacRitchie, F., et al., "Flour Polypeptides Related to Wheat Quality," Adv. Cer. Sci. Tech. 41. 10:79-145 (1990). Marcus, F. et al. (1988) "Comparative amino acid sequence of fructose-1,6-bisphosphatases: 42. Identification of a region unique to the light-regulated chloroplast enzyme", Proc. Natl. Acad. Sci. USA 85:5379-5383. Matsuda et al., "Reduction of Ovomucoid Immunogenic Activity on Peptic Fragmentation 43. and Heat Denaturation," Agric. Biol. Chem., 49(7):2237-2241 (1985). Miki, J. et al. (1988) "The .gamma.-subunit of ATP synthase from spinach chloroplasts Primary structure deduced from the cloned cDNA sequence" FEBS 232(1):221-226. CME DATE CONSIDERED: **EXAMINER:** 

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PTO/SB/08 (2-92) Sheet 4 of 5 Docket Number 416272005602 Application Number 10/698,824 Form PTO-1449 INFORMATION DISCLOSURE Applicants CITATION Bob B. BUCHANAN et al. IN AN APPLICATION Group Art Unit Not Yet Assigned (Use several sheets if necessary) Filing Date October 30, 2003 Mailing Date December 4, 2003 45. Morton, J.I. et al. (161), "Immunochemical Studies of Modified Ovomucoids," Arch. CMK Biochem. Biophys. 93:661-665. Muller, E.D. Thioredoxin deficiency in yeast prolongs S phase and shortens the G1 interval 46. of the cell cycle. J. Biological Chemistry 266 (14): 9194-9202 May 15, 1991. Muller, et al., "Thioredoxin is Essential for Photosynthetic Growth" J. Biol. Chem. 264:4008-47. 4014 (1989). Nishiyama et al., "Reactivity of Sulfhydryls in Reduced Gluten with Lipid Hydroperoxides," 48. Agric. Biol. Chem., 51(5):1291-1297 (1987). Osborne, T.B., et al., "Proteins of the Wheat Kernel," Amer. Chem. J. 15:392-471 (1983). 49. Porter, M.A., et al. (1988) "Characterization of the Regulatory Thioredoxin Site of 50. Phosphorinulokinse", The Journal of Biological Chemistry 263(1):123-129. Raines, C.A. et al. (1988) "Chloroplast fructose-1,6-bisphosphatase: the product of a mosaic 51. gene", Nucleic Acids Research 16:7931-7942. Rothenbuhler et al., "Disulfide Reduction and Molecular Dissociation Improves the 52. Proteolysis of Soy Glycinin by Pancreatin in vitro," Journal of Food Science, 51(6):1479-1482, (1986). Russel et al, "Sequence of Thioredoxin Reductase from Escherichia coli," J. Biol. Chem., 263(18):9015-9019 (1988). 53. 54. Ryan, C.A. et al., "Proteinase Inhibitors," The Biochemistry of Plants, 6:351-370 (1981). Sapirstein, H.D., et al., "Computer-Aided Analysis of Gliadin Electropheregrams. I. 55. Improvement of Precision of Relative Mobility Determination by Using a Three Reference Band Standardization," Cereal Chem. 62:372-377 (1985). Scheibe, R., et al., "Chloroplast Glucose-6-Phosphate Dehydrogenase: Km Shift upon Light 56. Modulation and Reduction," Arch. Biochem. Biophys. 274:290-297 (1990). Schernthaner, G. "Immunogenicity and allergenic potential of animal and human insulins" 57. Diabetes care 16 (Suppl 3):155-65. Dec. 1993. Schiavo, G. et al. (1990) "An Intact Interchain Disulfide Bond Is Required for the 58. Neurotoxicity of Tetanus Toxin", Infection and Immunity 58(12):4136-4141. Shewry, P.R., et al., "Seed Storage Proteins of Economically Important Cereals." Adv. Cer. 59. Sci. Tech. 7:1-83 (1985). Suske, G., et al., "NADPH-Dependent Thioredoxin Reductase and a New Thioredoxin from 60. Wheat," Z. Naturforsch. C., 34:214-221 (1979). Tatham, A.S., et al., "Structural Studies of Cereal Prolamins, Including Wheat Gluten," Adv. 61.

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Sheet 5 of 5 Docket Number 416272005602 Application Number 10/698,824 Form PTO-1449 Applicants INFORMATION DISCLOSURBO Bob B. BUCHANAN et al. IN AN APPLICATION (Use several sheets if necessary) Filing Date October 30, 2003 Group Art Unit Not Yet Assigned Mailing Date December 4, 2003 Tsang, M.L.-S., "Thioredoxin/Glutaredoxin System of Chlorella," Plant Physiol, 68:1098-62. CMK 1104 (1981). Wada et al., "Purothionin: A Seed Protein with Thioredoxin Activity," FEBS Letters, 63. 124(2):237-240 (1981). Watt, D. D., et al, "Effects on Lethality of Toxins in Venom from the Scorpion Centruroides 64. Sculpturatus by Group Specific Reagents," Toxicon 10:173-181 (1972). Wide et al., "Diagnosis of Allergy by an In-Vitro Test for Allergen Antibodies," The Lancet, 65. pp. 1105-1107 (Nov. 25, 1976). Wolosiuk, R.A., et al., "Thioredoxin and Glutathione Regulate Photosynthesis in 66. Chloroplasts," Nature 266:565-567 (1977). Yamada, "Inactive Debranching-Enzyme in Rice Seeds, and its Activation," Carbohydrate 67. MK Research, 90:253-157 (1981).

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